4.19 Bearings and Scale: 10-minute Pack

Calculators not allowed · about 10 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A sketch map shows two towns A and B. On the map, the bearing from A to B is 270 and the map distance is 4 cm. The scale is 1 cm to 2 km. Give the real compass direction from B back to A and the real distance in km.

(2)

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2 A surveyor draws a plan with scale 1:250. A garden measures 6 m by 4 m in reality. What are the dimensions on the plan in centimetres? Give answers to 1 decimal place if needed.

(2)

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3 A map shows three villages X, Y and Z. The bearing from X to Y is 112 and the bearing from X to Z is 284. Work out the size of the angle YXZ (angle at X between lines to Y and Z). State whether it is reflex or acute, giving reasoning.

(2)

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4 Write down the three-figure bearing of East.

(1)

5 A scale drawing uses a scale of 1 cm to 20 m. Write the scale in the form 1 : n.

(2)

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Mark scheme · 4.19 Bearings and Scale: 10-minute Pack

Question 1

knows reciprocal bearing is 090 or 270 ± 180 = 090	**M1**
090 and 8 km cao	**A1**

Answer: **090 and 8 km**

Question 2

converts metres to cm and divides by 250: 600 cm/250 = 2.4 and 400 cm/250 = 1.6	**M1**
2.4 cm by 1.6 cm cao	**A1**

Answer: **2.4 cm by 1.6 cm**

Question 3

finds difference using bearings: 284 - 112 = 172 or computes smaller angle 360 - 172 = 188 and chooses smaller (172)	**M1**
172 degrees, an obtuse angle (not reflex) cao	**A1**

Answer: **172 degrees; obtuse (angle less than 180)**

Question 4

090° cao	**B1**

Answer: **090°**

Question 5

20 m = 2000 cm	**M1**
1 : 2000 cao	**A1**

Answer: **1 : 2000**

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